

EVERY CHILD READING

An Action Plan of the Learning First Alliance

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rated herein, this paper should not necessarily be considered representative of the views of any individual who assisted in the writing or provided advice and comment.

Why Reading Reform Is Essential

Every educator, parent, and child knows that reading is the most important skill taught in elementary school.

The number of children who are poor readers is debated, but one widely accepted indicator is that 40 percent of all U.S. nine-year-olds score below the "basic" level on the National Assessment of Educational Progress (NAEP). Whatever the definition, the number of poor readers in our society is too high. Reading failure is overwhelmingly the most significant reason that children are retained, assigned to special education, or given long-term remedial services.

In addition to the large number of poor readers, there is a continuing gap between white students and African-American and Hispanic students. In 1994, 31 percent of white fourth graders scored below "basic," while 69 percent of African-American and 64 percent of Hispanic students did. These differences have major consequences for

The Learning First Alliance is composed of the following organizations:

American Association of Colleges for Teacher Education
American Association of School Administrators
American Federation of Teachers
Association for Supervision and Curriculum Development
Council of Chief State School Officers
Education Commission of the States
National Association of State Boards of Education
National Association of Elementary School Principals
National Association of Secondary School Principals
National Education Association
National PTA
National School Boards Association

our society, as they lead to inequalities among this nation's students that last throughout their schooling and beyond.

The reading problems of U.S. children are not new. Overall reading performance has been more or less unchanged since 1972, when the first NAEP report was issued. The notion that we can simply return to some earlier "golden age of reading" is wrong. Still, while reading performance may not be declining, it is certainly not improving. In what other area of American life would we be satisfied that things had gotten no worse in 25 years? Moreover, we now know more than ever before about how to help virtually every child become a successful reader.

Every Child Reading: An Attainable Goal

Our goal is for all healthy children to learn to read well. With what we now know, this country's reading problems are largely solvable if we have the will to solve them.

Using techniques available today—and new approaches that research could readily produce and validate within a few years—we could ensure reading success for all but a tiny proportion of students. If we started today, we could ensure that virtually every healthy child born in the 21st century would

be reading at or above the "basic level" on NAEP by age nine and that every child now in elementary school would graduate from high school a reader. We could also substantially increase the number of children reading at NAEP's "proficient" and "advanced" standards. Our goal as a nation must be no less.

What will it take to ensure the reading success of every child?

- Effective new materials, tools, and strategies for teachers.
- Extensive professional development to learn to use these strategies.
- Additional staff to reduce class sizes for reading instruction and to provide tutoring for students who fall behind.
- Changes in school organization for more appropriate class groupings and effective use of special education, Title I, and other supplementary resources.
- District, state, and national policies to set high standards of performance, to support effective classroom instruction, and to improve teacher training programs.
- Parents and other community members to support intensified efforts to improve the reading ability of all students.
- Parents and guardians to ensure that their children arrive at school ready to learn every day.

■ Intensified research.

No one of these reforms can do the job by itself, but all of these changes together can substantially increase reading success for all of America's children. These reforms will require that we use current resources in better, different ways. In particular, funds and personnel now devoted to professional development, inservice education, instructional time, research, and textbooks must be more sharply focused in the ways suggested below. In addition, these reforms will also require new resources—in such areas as pre-K, professional development, class-size reductions, and research.

Every Child Reading: A Research Base

In forging a strategy to ensure reading success for all, it is essential to focus on practices grounded in research.

After years of conflict between “whole language” and “phonics” advocates, a consensus about what works is emerging. The Learning First Alliance, made up of major education organizations, agreed to focus this white paper on reading practices based on strong research findings. Working with experts in the field, a draft paper was developed and adopted by the Learning First Summit in January 1998. Then, in Spring 1998, the National Research Council (NRC) of the National Academy of Sciences (NAS) completed a major review and synthesis of reading research, entitled *Preventing Reading Difficulties in Young Children*. Seventeen of the nation's leading experts served on that panel, and although they represented a wide spectrum of views, they did reach consensus and all signed off on the final report. The Alliance has referenced some of the NAS findings, when helpful, to amplify points made in this final Alliance document.

The Learning First Alliance sees its challenge as having to react quickly to new research information without falling victim to unsubstantiated fads. To meet this challenge, this paper relies heavily on quantitative research to inform key decisions that policy makers and educators must make to improve students' reading skills. This paper draws on evidence from such interdiscipli-

nary fields as language, cognition, neurological sciences, and the psychology of reading. We pay special attention to studies of the reading achievement of children taught using one method to that of similar children taught by different methods. We also draw heavily on longitudinal work, which finds correlations between various teacher practices and children's reading or between children's early skills and knowledge and their later reading. These types of research, if replicated many times in many circumstances, can tell educators that, on average, one approach is likely to be more effective than another. Qualitative research, in contrast, offers valuable insights and directions for future research. It also helps us to understand what's behind the quantitative research. Yet qualitative research doesn't tell us what practices and programs can be successfully replicated, which is a fundamental need of our schools.

We firmly believe that without research, professionals cannot do their jobs well. Still, even relying on the best research available to make difficult decisions, it is important to keep two caveats in mind. First, the applications of research findings must be tempered by wisdom, experience, and sensitivity to the needs of a particular child or group of children. Second, research develops over time. What seems well established today may be challenged or modified by new findings tomorrow.

Keeping these limitations in mind, however, it is the responsibility of educators and policy makers to take advantage of the best available research and to use it as the basis for decisions about reading instruction and policy. The following sections summarize what the research says about the major types of reforms that are necessary to bring all children to high levels of literacy.

A. PREKINDERGARTEN AND KINDERGARTEN PROGRAMS

The foundations for reading success are formed long before a child reaches first grade.

Starting at infancy, parents and other care providers can give children a strong base of language concepts, cognitive skills related to print, and a love of books. Research on instruction in prekindergarten and kindergarten identifies the concepts and skills that

are the foundation of success in early reading and the instructional strategies that best help children to learn these concepts and skills.

Quality preschool experiences increase cognitive skills at entry to first grade. While these improved cognitive skills do not directly result in improved reading, they do prepare children to profit from high-quality reading instruction. Similarly, full-day kindergarten programs can increase children's cognitive skills and their readiness to profit from high-quality first-grade instruction.

Early diagnostic assessments, beginning as soon as kindergarten, can be a useful tool to assure immediate intervention for the children who are identified as being at risk of reading failure.

During pre-K and kindergarten, students should develop:

Language skills. At entry to first grade, students will need to have a broad array of language experiences under their belts. Oral language, vocabulary, and other language concepts are crucial foundations for success in reading, especially reading comprehension. In particular, children need to be able to use language to describe their experiences, to predict what will happen in the future, and to talk about events that happened in the past. Early childhood programs can develop children's language by giving them many opportunities to discuss their experiences, make predictions, and discuss past events in small groups. Many children also benefit from instruction in key language concepts, such as colors and shapes, prepositions (e.g., under/over, before/after), sequence (e.g., small to large), and classification (e.g., animals, containers, and plants).

Background knowledge. A key predictor of successful reading comprehension is background knowledge. Children need knowledge and understanding of their own world in order to make sense of what they read. In addition, children need to be exposed to content in science, history, and geography from an early age to give them a context for understanding what they read.

Appreciation of stories and books. Children need a great deal of experience with literature, as active listeners and as active par-

ticipants. Storybook reading is a typical activity in prekindergarten and kindergarten. Research shows that the details of storybook reading matter. In reading to children, teachers should stop to let children discuss how the characters feel and what they want to do, and make predictions about how stories will end. They should help children to actively explore the meaning of new words and concepts. They should give children opportunities to retell the text after hearing it, giving them a chance to use the story's new words and language and to put pictures of the story's events in the right order. Book reading should include nonfiction as well as fiction selections.

Concepts of print. Children need to know that stories and other texts are written from left to right, that spaces between words matter, and that there is a one-to-one correspondence between the words on a page and the words the reader says.

Phonemic awareness. One of the most important foundations of reading success is phonemic awareness. Phonemes are the basic speech sounds that are represented by the letters of the alphabet, and phonemic awareness is the understanding that words are sequences of phonemes. Phonemic awareness is demonstrated by the ability to identify and manipulate the sounds within spoken words. Children can be taught to hear that "cat" is composed of three sounds: /k/, /a/, /t/. They can learn to assemble phonemes into words as well as break words into their phonemes even before they are writing letters or words.

Giving children experience with rhyming words in the preschool years is an effective first step toward building phonemic awareness. Hearing rhymes, and then producing rhymes for given words, requires children to focus on the sounds inside words. Later, more direct instruction on the individual sounds that make up words is needed. The goal is to have children start their more formal instruction in reading with a comfortable familiarity with the sounds that letters represent and with "hearing" those sounds within words.

Alphabet and letter sounds. One of the best foundations for early reading success is familiarity with the letters of the alphabet.

It is the responsibility of educators and policy makers to take advantage of the best available research and to use it as the basis for decisions.

Children can learn alphabet songs, match pictures or objects with initial letters, play games with letters and sounds, and so on. They can learn to recognize and print their names, the names of their classmates, and names of familiar objects in the classroom or home. As they gain command of letters and sounds, kindergarten children can begin to write simple stories. By the end of kindergarten, children should be able to recognize, name, print letters, and know the sounds they represent.

B. BEGINNING READING PROGRAMS

When it comes to reading, the nine months of first grade are arguably the most important in a student's schooling.

It is during first grade that most children define themselves as good or poor readers. Unfortunately, it is also in first grade where common instructional practices are arguably most inconsistent with the research findings. This gap is reflected in the basal programs most commonly used in first-grade classrooms. The National Academy of Sciences report found that the more neglected instructional components of basal series "are among those whose importance is most strongly supported by the research."

In this discussion, there are again certain caveats to keep in mind. There is no replacing passionate teachers who are keenly aware of how their students are learning; research will never be able to tell teachers exactly what to do for a given child on a given day. What research can tell teachers, and what teachers are hungry to know, is what the evidence shows will work most often with most children and what will help specific groups of children.

To integrate research-based instructional practices into their daily work, teachers need:

Training in alphabetic basics: To read, children must know how to blend isolated sounds into words; to write, they must know how to break words into their component sounds. First-grade students who don't yet know their letters and sounds will need spe-

¹The term "phonics" is used in this document as it is widely understood by educators, to mean instruction that focuses on teaching the alphabetic principle and the sound-symbol correspondences.

cial catch-up instruction. In addition to such phonemic awareness (see the discussion on phonemic awareness on p. 55), beginning readers must know their letters and have a basic understanding of how the letters of words, going from left to right, represent their sounds. First-grade classrooms must be designed to ensure that all children have a firm grasp of these basics before formal reading and spelling instruction begin.

A proper balance between phonics¹ and meaning in their instruction. In recent years, most educators have come to advocate a "balanced approach" to early reading instruction, promising attention to basic skills and exposure to rich literature. However, classroom practices of teachers, schools, and districts using "balanced approaches" vary widely.

Some teachers teach a little phonics on the side, perhaps using special materials for this purpose, while they primarily use basal reading programs that do not follow a strong sequence of phonics instruction. Others teach phonics "in context," which means stopping from time to time during reading or writing instruction to point out, for example, a short "a" or an application of the silent "e" rule. These instructional strategies work with some children but are not consistent with evidence about how to help children learn to read most effectively, especially those who are most at risk.

The National Academy of Sciences study, *Preventing Reading Difficulties in Young Children*, recommends first-grade instruction that provides explicit instruction and practice with sound structures that lead to familiarity with spelling-sound conventions and their use in identifying printed words. The bottom line is that all children have to learn to sound out words rather than relying on context and pictures as their primary strategies to determine meaning.

Does this mean that every child needs phonics instruction? Research shows that all proficient readers rely on deep and ready knowledge of spelling-sound correspondence while reading, whether this knowledge was specifically taught or simply inferred by students. Conversely, failure to learn to use spelling/sound correspondences to read and spell words is shown to be the most frequent and debilitating cause of reading difficulty. No one questions that many children do learn to read without any

direct classroom instruction in phonics. But many children, especially children from homes that are not language rich or who potentially have learning disabilities, do need more systematic instruction in word-attack strategies. Well-sequenced phonics instruction early in first grade has been shown to reduce the incidence of reading difficulty even as it accelerates the growth of the class as a whole. Given this, it is probably best to start all children, most especially in high-poverty areas, with explicit phonics instruction.

Such an approach does require continually monitoring children's progress both to allow those who are progressing quickly to move ahead before they become bored and to ensure that those who are having difficulties get the assistance they need.

Strong reading materials: Early in first grade, a child's reading materials should feature a high proportion of new words that use the letter-sound relationships they have been taught. It makes no sense to teach decoding strategies and then have children read materials in which these strategies won't work. While research does not specify the exact percentage of words children should be able to recognize or sound out, it is clear that most children will learn to read more effectively with books in which this percentage is high.

On this point, the National Academy of Sciences' report recommends that students should read "well-written and engaging texts that include words that children can decipher to give them the chance to apply their emerging skills." It further recommends that children practice reading independently with texts slightly below their frustration level and receive assistance with slightly more difficult texts.

If the books children read only give them rare opportunities to sound out words that are new to them, they are unlikely to use sounding out as a consistent strategy. A study comparing the achievement of two groups of average-ability first graders being taught phonics explicitly provides evidence of this. The group of children who used texts with a high proportion of words they could sound out learned to read much better than the group who had texts in which they could rarely apply the phonics they were being taught.

None of this should be read to mean that

children should be reading meaningless or boring material. There is no need to return to "Dan can fan the man." It's as important that children find joy and meaning in reading as it is that they develop the skills they need. Research shows that the children who learn to read most effectively are the children who read the most and are most highly motivated to read.

The texts children read need to be as interesting and meaningful as possible. Still, at the very early stages, this is difficult. It isn't possible to write gripping fiction with only five letter sounds. But a meaningful context can be created by embedding decodable text in stories that provide other supports to build meaning and pleasure. For example, some early first-grade texts use pictures to represent words that students cannot yet decode. Others include a teacher text on each page, read by the teacher, parent, or other reader, which tells part of the story. The students then read their portion, which uses words containing the spelling-sound relationships they know. Between the two types of texts, a meaningful and interesting story can be told.

Strategies for teaching comprehension.

Learning to read is not a linear process. Students do not need to learn to decode before they can learn to comprehend. Both skills should be taught at the same time from the earliest stages of reading instruction. Comprehension strategies can be taught using material that is read to children, as well as using material the children read themselves. Before reading, teachers can establish the purpose for the reading, review vocabulary, activate background knowledge, and encourage children to predict what the story will be about. During reading, teachers can direct children's attention to difficult or subtle dimensions of the text, point out difficult words and ideas, and ask them to identify problems and solutions. After reading, children may be asked to retell or summarize stories, to create graphic organizers (such as webs, cause-and-effect charts, or outlines), to put pictures of story events in order, and so on. Children can be taught specific metacognitive strategies, such as asking themselves on a regular basis whether what they are reading makes sense or whether there is a one-to-one match between the words they read and the words on the page.

It makes no sense to teach decoding strategies and then have children read materials in which these strategies won't work.

Writing programs. Creative writing instruction should begin in kindergarten and continue during first grade and beyond. Writing gives children opportunities to use their new reading competence, as well as being valuable in its own right. Research shows invented spelling to be a powerful means of leading students to internalize phonemic awareness and the alphabetic principle.

Still, while research shows that using invented spelling is not in conflict with teaching correct spelling, the National Academy of Sciences report does recommend that conventionally correct spelling be developed through "focused instruction and practice" at the same time students use invented spelling. The Academy report further recommends that "primary grade children should be expected to spell previously studied words and spelling patterns correctly in final writing products."

Smaller class size. Class size makes a difference in early reading performance. Studies comparing class sizes of approximately fifteen to those of around twenty-five in the early elementary grades reveal that class size has a significant impact on reading achievement, especially if teachers are also using more effective instructional strategies. Reductions of this magnitude are expensive, of course, if used all day. A more practical alternative is to reduce class size just during the time set aside for reading, either by providing additional reading teachers during reading periods or by having certified teachers who have other functions most of the day (e.g., tutors, librarians, or special education teachers) teach a reading class during a common reading period.

Curriculum-based assessment. In first grade and beyond, regular curriculum-based assessments are needed to guide decisions about such things as grouping, the pace of instruction, and individual needs for assistance (such as tutoring). The purpose of curriculum-based assessment is to determine how children are doing in the particular curriculum being used in the classroom or school, not to indicate how children are doing on national norms. In first grade, assessments should focus on all of the major components of early reading: decoding of phonetically regular words, recognition of sight words, comprehen-

sion, writing, and so on. Informal assessments can be conducted every day. Anything children do in class gives information to the teacher that can be used to adjust instruction for individuals or for the entire class. Regular schoolwide assessments based on students' current reading groups can be given every six to ten weeks. These might combine material read to children, material to which children respond on their own, and material the child reads to the teacher individually. These school assessments should be aligned as much as possible with any district or state assessments students will have to take.

Effective grouping strategies. Children enter first grade at very different points in their reading development. Some already read while others lack even the most basic knowledge of letters and sounds. Recognizing this, schools have long used a variety of methods to group children for instruction appropriate to their needs. Each method has its own advantages and disadvantages.

The most common method is to divide children within their own class into three or more reading groups, which take turns working with the teacher. The main problem with this strategy is that it requires "follow-up time" activities children can do on their own while the teacher is working with another group. Studies of follow-up time find that, all too often, it translates to "busywork." Follow-up time spent in partner reading, writing, working with a well-trained paraprofessional, or other activities closely linked to instructional objectives may be beneficial, but teachers must carefully review workbook, computer, or other activities to be sure they are productive.

Another strategy is grouping within the same grade. For example, during reading time there might be a high, middle, and low second-grade group. The problem with this type of grouping is that it creates a low group with few positive models.

Alternatively, children in all grades can be grouped in reading according to their reading level and without regard to age. A second-grade-level reading class might include some first graders, many second graders, and a few third graders. An advantage of this approach is that it mostly eliminates the "low group" problem and gives each teacher one reading group. The risk is that some older

children will be embarrassed by being grouped with children from a lower grade level. Classroom management and organization for reading instruction are areas that deserve further research and attention.

Some other things that will help teachers to teach reading effectively include:

Tutoring support. Most children can learn to read by the end of first grade with good-quality reading instruction alone. In every school, however, there are children who need more assistance. Small-group remedial methods, such as those typical of Title I or special education resource room programs, have not generally been found to be effective in increasing the achievement of these children. One-to-one tutoring, closely aligned with classroom instruction, has been effective for struggling first graders. While it is often best to have certified teachers working with children with the most serious difficulties, well-trained paraprofessionals can develop a valuable expertise for working with these children. Trained volunteers who are placed in well-structured, well-supervised programs also can be a valuable resource.

Home reading. Children should be spending more time on reading than is available at school. They should read at home on a regular basis, usually twenty to thirty minutes each evening. Parents can be asked to send in signed forms indicating that children have done their home reading. Many teachers ask that children read aloud with their parents, siblings, or others in first grade and then read silently thereafter. The books they read should be of interest to them and should match their reading proficiency.

C. SECOND GRADE AND BEYOND

Children who are not decoding and comprehending well at the end of first grade need immediate special attention.

By the end of first grade, with high-quality instruction and any necessary tutoring or other assistance, most students should, in fact, be able to decode virtually any phonetically regular short word with short or long vowels and read a large number of high-frequency sight words. If children have developed good decoding skills in first grade, further instruction in phonics is needed, but limited.

By the time they enter second grade, children also need to have solid comprehension skills, both for understanding material they read on their own and for material that is read to them. They need to be able to understand a beginning second-grade text they haven't seen before, and they need to learn to monitor their own comprehension for confusion and uncertainty.

As they progress through second grade and beyond, children need to develop a real joy of reading and to read a wide variety of materials, expository (nonfiction) as well as narrative. Through such reading, children will develop greater fluency, vocabulary, background knowledge, comprehension strategies, and writing skills.

Instruction needs to be concentrated on:

Literature. At this point, children should read quality literature appropriate to their current reading levels, both in school and at home. Basal programs, student readers, novels, anthologies, and other sources of good reading material can all be used. The goal increasingly becomes for children to develop a real joy of reading that propels them to read frequently and widely.

Expository text (content knowledge). In most schools, reading instruction has traditionally focused overwhelmingly on narratives. Yet children also need strong comprehension strategies for science, history, geography, and other content areas. These are important in their own right, of course, but take on additional importance in reading development. Research finds that one of the best predictors of reading comprehension is background knowledge. Obviously, it is much easier to comprehend narrative text such as the *Diary of Anne Frank* if you know about the Holocaust, or to comprehend *To Kill a Mockingbird* or *Southern* if you know about the history of the American South. It makes sense both to infuse expository material into reading instruction and to teach effective reading comprehension strategies and study skills during social studies and science periods.

Reading comprehension. Everything teachers do in reading class and beyond should be designed to build children's ability to understand increasingly complex content of all sorts. Children need to learn reading

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strategies known to enhance comprehension and retention. For example, children can learn to scan material before they read, to predict what will happen in the story, and to recall background knowledge about the topic discussed in the material. While reading, they can learn to look for characters, settings, problems, and problem solutions, to summarize main ideas, and to monitor their own understanding (for example, regularly asking themselves whether they understand what they are reading). After reading, children can be taught to make charts, webs, outlines, and other representations of the content. They can generate questions for other children, or write their own reactions to stories or factual material. They can summarize or retell stories to partners or to the teacher. They can be taught generic reading comprehension strategies such as finding the main idea, starting with simple paragraphs and moving to more complex material. All of these strategies help build reading comprehension skills that will work with any reading material, not just the particular stories or content children are reading.

Vocabulary. Children's vocabulary can be built by teaching specific words that appear in students' texts, giving students opportunities to use these words in a variety of contexts, and teaching students dictionary skills. We want students paying attention to and liking words. While research shows some benefit of direct instruction on vocabulary development, it also finds that vocabulary growth is heavily influenced by the amount and variety of material children read. Nevertheless, the power of home and school reading for vocabulary building are strongly influenced by the support and encouragement that students are given for attending to and learning about new words as they read. A good practice, for example, is to ask students to note three new words of their own choice in the course of their reading and then to set aside some time to collect, discuss, and revisit such words, extending and clarifying their usage and meanings. In addition, vocabulary will be boosted as children become fluent in using and understanding multi-syllabic patterns.

Writing. Research on creative writing finds positive effects of writing process models in which students work in small groups to collaboratively plan, draft, revise, edit, and pub-

lish individual compositions in various genres. Specific instruction in writing for different audiences and purposes (such as persuasive argument, description, and giving directions), as well as instruction in strategies that enrich and clarify language expression, is essential. Language mechanics skills, such as capitalization, usage, and grammar, can be directly taught and integrated into students' own writing through the editing process. For example, students might study proper use of adjectives and adverbs and then write descriptive compositions. An editing checklist would add "correct use of adjectives and adverbs" as a criterion for review in a peer-editing process.

Cooperative learning. Cooperative learning can be very effective in upper elementary reading and writing instruction if it is properly used. In general, students should work in groups of 4 to 5 members that stay together over a period of 6 to 8 weeks. The groups should be able to earn certificates or other recognition based on the degree to which all of their members have mastered the material being presented in class. For example, the teacher might present a lesson on main idea, and then let students work in groups to practice that skill. Groups should be set up to help all members master material, not to make it possible for any child to do his or her group's work. At the end of the period, the children might be individually assessed on main idea, and the group could receive recognition based on the total score of the members' quizzes.

Strategies for Achieving the Goal of Every Child Reading

If 40 percent of all third graders are not reading adequately today, reducing this substantially by the time children being born today reach third grade will be an enormous undertaking. Different kinds of strategies will be necessary to improve the performance of children in general, of those with mild reading difficulties, of those with serious reading difficulties, and of those who are dyslexic. There is a great deal we can do now on all of these fronts, including:

1. Base educational decisions on evidence, not ideology. It is time to call off

the endless "reading wars." As the review of research presented earlier clearly demonstrates, there is validity to methods derived from many different philosophical bases. Some areas of emerging consensus include:

- All children need explicit, systematic instruction in phonics and exposure to rich literature, both fiction and nonfiction.
- While children need instruction in phonics in early reading development, even then, attention to meaning, comprehension strategies, language development, and writing is essential.
- At all times, developing children's interest and pleasure in reading must be as much a focus as developing their reading skills.

The famous pendulum of educational innovation swings more wildly in reading than in any other subject. Pendulum swings of this kind are characteristic of fields driven by fashions, not by evidence. Hemlines go up and down because of changing tastes, not new evidence; progress in medicine, engineering, and agriculture, based to a far greater degree on evidence from rigorous research, is both faster and less subject to radical shifts. In the same way, educational practice must come to be based on evidence—not ideology.

While there is always more we'd like to know, we do know enough now to take action that will greatly reduce the number of children who cannot read and greatly increase the number who can reach high levels of achievement. We cannot wait for research to answer every question while another generation of children falls behind.

2. Promote adoption of texts based on the evidence of what works. Historically, reading textbooks have been adopted primarily based on criteria that have little to do with evidence: attractiveness, cost, supplements, and so on. This must change. There is little evidence about the effectiveness of particular textbooks, but there is enough evidence to recommend certain types of approaches, such as the use of texts with a high proportion of words that can be sounded out in first grade.

3. Provide adequate professional development. Better books will not in themselves lead to better readers. Teachers and paraprofessionals must receive quality staff develop-

ment on instructional strategies. This means far more than the brief inservice presentations traditionally provided by textbook publishers. Effective professional development requires extended time for initial inservice that includes discussions of research on how children learn to read as well as specific instructional strategies. In addition, it requires extensive in-class follow-up. Expert coaches (who may be fellow teachers) need to visit the classes of teachers who are implementing new reading approaches and then need to have time to discuss strengths and next steps with the teachers. Teachers and paraprofessionals need to have opportunities to meet regularly to discuss their implementation of new methods—and to share problems, solutions, and innovative ideas. Professional development needs to be seen as a never-ending process that involves the entire school staff, not a one-time event.

4. Promote whole-school adoption of effective methods. Some of the most effective approaches to early literacy instruction are comprehensive methods that provide instructional materials, assessments, extensive professional development, accommodations (such as tutoring) for children who are having difficulties, designs for classroom and school organization, and other features. These methods are adopted by the entire school, providing a common focus and extensive assistance in implementing a well-integrated design for change.

5. Involve parents in support of their children's reading. Research shows that parent involvement, especially in activities that directly support their children's school success, is correlated with reading achievement. Parents can do a great deal to build their children's literacy development. They can read to children from infancy through the elementary grades. They can monitor their children's home reading and ask teachers to require regular reading as homework. They can take children to the library and borrow or purchase books.

Teachers should take special efforts to open communication with parents, encouraging them to take an active interest in their children's schoolwork and progress. Many parents feel uncomfortable without such an invitation and guidance. Teachers can provide parents with special strategies to increase the value of home reading, such as

At all times, developing children's interest and pleasure in reading must be as much a focus as developing their reading skills.

talking to children about characters and plots, and asking them to make predictions or summarize stories. Parents can serve as volunteer listeners or tutors in the school. Perhaps most importantly, parents can communicate a love of reading, pleasure in children's reading progress, and support for the school's efforts to ensure the literacy of all children. In addition, they can advocate within the school and beyond for use of effective instructional methods for all.

6. Improve preservice education and instruction. Reading instruction would be improved if all teachers had instruction on the research base about learning to read, instruction on applications of that research in the classroom, and experience with such methods during their preservice education and early years of teaching. Preservice education typically gives teachers too little instruction in reading methods and is often discrepant with research on effective methods. Also, prospective teachers rarely get opportunities to practice reading methods before their student teaching experience. Schools of education need to improve their programs for elementary teachers substantially and to give prospective teachers experiences, such as tutoring in local schools or working in summer school or afterschool programs, that will give them better preparation in this most critical of skills. School districts should also invest in high-quality induction programs to make certain that new teachers are well prepared in effective approaches to reading, classroom management, assessment, and so on and are well supported in implementing these strategies.

7. Provide additional staff for tutoring and class-size reduction. Schools need additional staff to ensure adequate reading performance by all children. These staff are needed for two purposes. First, they are needed as tutors for children who are struggling in reading in the early grades. Second, they are needed to reduce class sizes in reading. The same teachers can be used for both of these purposes; for example, a certified teacher can provide tutoring sessions to at-risk children most of the day but also teach a reading class during a common schoolwide reading period, thereby reducing class size for reading. Class sizes can also be reduced for reading by providing training

to librarians, special education teachers, and other certified teachers willing and able to teach reading, or by hiring retired teachers or other part-time teachers for the same purpose.

Paraprofessionals can also be used to provide one-to-one tutoring to struggling students. Such tutoring requires extensive training, follow-up, and supervision and should supplement, not replace, tutoring by certified teachers for children with the most serious reading difficulties.

For students without serious reading difficulties, volunteers, if trained and supervised to provide assistance consistent with the school's reading program, may also be effective tutors, especially to provide students with extended supported time for reading.

8. Improve early identification and intervention. Diagnostic assessments should be administered regularly to kindergartners and first graders. Moreover, both time and instruments should be available for individual assessment as needed. Such tools can tell us which children are having reading difficulties and enable teachers to provide immediate and high-quality interventions if necessary.

9. Introduce accountability measures for the early grades. In recent years, many states have implemented assessment and accountability schemes that hold schools accountable for the performance of children in selected grades. Usually, the earliest assessments are of third or fourth graders. If younger children are assessed for accountability purposes, it is almost always on group-administered standardized tests that have little validity for young readers.

The problem with these strategies is that they have unintentionally created disincentives to focus on the quality of early grades instruction. A school that adds prekindergarten or full-day kindergarten programs or invests in professional development for beginning reading or adds tutors or reduces class sizes in the early grades may not see any benefit of these investments in terms of third- or fourth-grade test scores for several years.

One solution to this problem would be to introduce individually administered reading measures at the end of first or second grade. These might be given by specially trained

teachers from other schools (such as Title I teachers or other teachers without home-rooms). Such measures could be used for accountability assessments in combination with the results from other assessments in the elementary grades. But extraordinary care must be taken to assure that pressure—on students or staff—to do well on these assessments does not translate into the use of inappropriate tests or instructional time lost to test preparation.

10. Intensify reading research. If early reading were as high a priority in our society as, say, space exploration was in the 1960s, there is little question that early reading failure could be virtually eliminated. A large and broadly focused program of research, development, and evaluation could resolve early reading problems within 5 or 10 years; at present, there is no effort of this size or scope on the horizon.

We need to learn more about:

- identifying the most effective reading approaches, programs, methods of school and classroom organization, and intensive professional development approaches;
- developing strategies for the children who do not succeed, even with high-quality instruction and tutoring;
- choosing forms of tutoring that make best use of this expensive resource;
- promoting effective strategies for prekindergarten and kindergarten;
- determining the proper balance between phonics and meaning. (For example, it would be useful to learn the best mix between decodable and sight words in early first-grade reading materials, and it would be useful to know precisely how long and how intensively children need instruction in phonics.);
- helping children who are now in the upper elementary and secondary grades who have inadequate reading skills;
- developing and evaluating better strategies for children who speak languages other than English, whether they are taught in English or in their home language;
- using technology for beginning reading, for upper-elementary reading, for writing, and for remediation; and
- building effective extended-day and summer programs. □

References

Trends in Reading Performance

- Campbell, J.R., Donahue, P.L., Reese, C.M., & Phillips, G.W. (1996). NAEP 1994 reading report card for the nation and the states. Washington, DC: National Center for Education Statistics, U.S. Department of Education.
- National Center for Education Statistics (1997). The condition of education, 1997. Washington, DC: U.S. Department of Education, NCES.

Beginning Reading Curriculum and Instruction

- Adams, M.J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Barr, R., Kamil, M.L., Mosenthal, P., & Pearson, P.D. (Eds.) (1991). *Handbook of reading research*. New York: Longman.
- Hiebert, E.H., & Taylor, B.M. (Eds.) (1995). *Getting reading right from the start: Effective early literacy interventions*. Boston: Allyn & Bacon.
- Hiebert, E.H., & Raphael, T.E. (1996). "Psychological perspectives on literacy and extensions to educational practice." In D.C. Berliner & R.C. Calfee (Eds.), *Handbook of Educational Psychology*. New York: Macmillan.
- Juel, C., & Roper-Schneider, D. (1985). "The influence of basal readers on first-grade reading." *Reading Research Quarterly*, 20, 134-152.
- Macmillan, B. (1997). "Why schoolchildren can't read." Trowbridge, England: Redwood.
- National Academy of Sciences (forthcoming). *The prevention of reading difficulties in young children*. Washington, DC.
- Orton Dyslexia Society (1997). "Informed instruction for reading success: Foundations for teacher preparation." Baltimore.
- Pearson, P.D. (1996). "Six ideas in search of a champion: What policy makers should know about the teaching and learning of literacy in our schools." *Journal of Literacy Research*, 28 (4), 302-309.

Prekindergarten and Kindergarten Programs

- Campbell, F.A., & Ramey, C.T. (1995). "Cognitive and school outcomes for high-risk African-American students at middle adolescence: Positive effects of early intervention." *American Educational Research Journal*, 32, 743-772.
- Meisels, S.J., & Shonkoff, J.P. (Eds.) (1990). *Handbook of early childhood intervention*. New York: Cambridge University Press.
- Spodek, B. (Ed.) (1993). *Handbook of research in the education of young children*. New York: Macmillan.

Grouping and Class Size

- Egelson, P., Harman, P., & Achilles, C.M. (1996). "Does class size make a difference?" Greensboro, NC: SERVE.
- Slavin, R.E. (1989). *School and classroom organization*. Hillsdale, NJ: Erlbaum.

Tutoring

- Lyons, C.A., Pinnell, G.S., & DeFord, D.E. (1993). *Partners in learning: Teachers and Children in Reading Recovery*. New York: Teachers College Press.
- Wasik, B.A. (1997). "Volunteer tutoring programs: Do we know what works?" *Phi Delta Kappan*, 79 (4), 282-287.
- Wasik, B.A., & Slavin, R.E. (1993). "Preventing early reading failure with one-to-one tutoring: A review of five programs." *Reading Research Quarterly*, 28, 178-200.

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